

REMARKS

The Examiner's Action mailed on February 19, 2004 has been received and its contents carefully considered. Additionally attached to this Amendment is a Petition for a One-Month Extension of Time, extending the period for response to June 19, 2004.

In this Amendment, Applicant has editorially amended the specification, rewritten claim 1 as new claim 2, presented new claims 3 and 4, and cancelled claim 1. Claims 2 and 3 are the independent claims. Claims 2-4 are pending in the application. For at least the following reasons, it is submitted that this application is in condition for allowance.

The Examiner's Action has objected to the title of the invention as not being descriptive. In response, the title has been amended in a manner that is clearly indicative of the invention to which the claims are directed. However, the Examiner's suggested title has not been adopted, since the present application is not directed a side-coupling of an optical fiber bundle. It is requested that this objection be withdrawn.

The Examiner's Action has rejected claim 1 under 35 USC §112, first paragraph, as failing to comply with the written description requirement. The Examiner's contention is that the method of "rolling", as well as the "sophisticated changes" recited in claim 1, were not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention.

Without acquiescing to the properness of this rejection, since claim 1 has been cancelled, and since the newly presented claims do not recite the method of "rolling", nor the term "sophisticated changes", this rejection has been rendered moot. Moreover, it is submitted that new claims 2-4 comply with the provisions of 35 USC § 112, first paragraph.

The Examiner's Action has also rejected claim 1 under 35 USC §112, second paragraph, as being indefinite. Although the rejection has effectively been rendered moot due to the cancellation of claim 1, it is noted that the new claims include the term "light-emitting segment", which term the Examiner contends rendered claim 1 indefinite. However, it is respectfully submitted that the use of this term is proper, and does not render the claims indefinite. That is, light is emitted from this segment, after being transmitted through the optical fiber. To help the Examiner understand this concept, attached hereto is a model of Applicant's claimed invention. As the Examiner will note, when the input ends of the optical fibers are positioned over the light-producing device, the light is transmitted through the fibers, and emitted from the light-emitting segments. The fact that the optical fibers do not actually produce the light is irrelevant as to whether the light-emitting segments can emit light. Moreover, it is also noted that the references relied upon by the Examiner refer to light-emitting areas of the optical fibers (*see Weber*, second page, second paragraph), so that defining an optical fiber to have a light-emitting segment is clearly accepted in the art. Since claims 2-4 comply with all of the provisions of 35 USC §112, it is requested that these rejections be withdrawn.

The Examiner's Action has rejected claim 1 under 35 USC §103 as being obvious over *Shaw* (USP 4,473,270) in view of *Newport Tutorial*, *Weber*, and *Stern* (USP 5,771,321). Because claim 1 has been cancelled, Applicant will treat this rejection as pertaining to claims 2-4. It is submitted that these claims are *prima facie* patentably distinguishable over the cited references for at least the following reasons.

Applicant's independent claim 2 is directed toward an optical fiber structure, that includes a light emitting device, and a plurality of optical fibers. Each optical fiber has an input end. The optical fibers are bundled together at their respective input ends, with

the respective input ends being positioned in a region of the light emitting device. Each input end receives light emitted from the light emitting device, and each optical fiber transmits the received light through an interior thereof. Each optical fiber further has a light emitting segment that has an outer surface that is roughened relative to an outer surface of a remainder of the optical fiber. Each light emitting segment emits the light, through its roughened outer surface, that is transmitted through the interior of the optical fiber. Claim 3 recites similar features, but is directed to only the optical fiber. As disclosed by Applicant's specification, the light emitting segment provides for a larger light-emitting area while maintaining a structural strength of the optical fibers (*see* page 6, lines 10-14). This claimed invention is neither disclosed nor suggested by the cited references.

Shaw teaches a splice-free optical fiber arrangement, which includes a coupler 10 used to join strands 12A and 12B together. This reference also teaches that the strands 12A and 12B have a portion in which fiber optic material is removed, to form oval-shaped, planar surfaces 18A and 18B. Planar surfaces 18A and 18B are in a facing relationship, to form an interaction region 32, in which light may be transferred between the strands 12A and 12B (*see* column 5, lines 11-30). However, and in contrast to the present invention, this reference does not disclose or suggest an optical fiber that has a light emitting segment that has an outer surface that is roughened relative to an outer surface of a remainder of the optical fiber, as recited in claims 2 and 3. Moreover, this reference does not disclose or suggest that light is emitted through a roughened outer surface of a light emitting segment, as recited in claims 2 and 3.

The Examiner's Action also relies on the teachings *Newport Tutorial*, *Weber*, and *Stern*. However, none of these references, either taken alone or in combination,

overcome the above-noted deficiencies of *Shaw*. Although *Newport Tutorial* and *Weber* are both directed toward optical fibers, neither of these references teach an optical fiber that has a light emitting segment that has an outer surface that is roughened relative to an outer surface of a remainder of the optical fiber, as recited in claims 2 and 3. Moreover, these references do not disclose or suggest that light is emitted through a roughened outer surface of a light emitting segment, as recited in claims 2 and 3. The Action proposes that these references teach Applicant's claimed invention, since these references teach that optical fibers can be made by microbending over a rough surface. However, and in fact, these references specially teach away from such a light emitting segment. That is, both of these references teach that optical fibers are provided with a protective coating to reduce crosstalk and micro-bending that occurs when fibers are pressed against rough surfaces. Moreover, *Newport Tutorial* specifically teaches that surface flaws are the cause of most fiber failures (*see* Page 4 of 8, under the heading of Fiber Stripping). Thus, why would one skilled in the art have relied on the teachings from these references to modify an optical fiber to have a light emitting segment having a roughened outer surface through which light is emitted, when these references teach that such a roughened area would lead to fiber failure, and that such a roughened area is specifically prevented through the addition of a protective coating? It is respectfully submitted that one skilled in the art would not have attempted such a modification, except in a hindsight attempt at reconstructing Applicant's claimed invention.

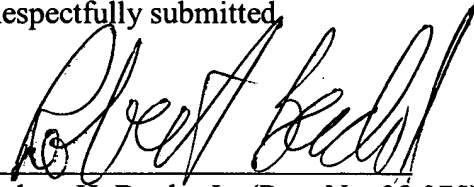
The Action also relies on the teachings of *Stern*. However, this reference isn't even directed toward optical fibers, much less providing an optical fiber with a light emitting segment having a roughened outer surface through which light is emitted, as recited in claims 3 and 4. As such, it is submitted that claims 2-4 are patentably

distinguishable over the cited references, and it is requested that these rejections be withdrawn, and that these claims be allowed.

It is submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of the application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert H. Berdo, Jr.", written over a horizontal line.

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